

NPIC/TSSG/DED-1376-68
25 September 1968

MEMORANDUM FOR THE RECORD

Declass Review by NGA.

SUBJECT: Trip Report

1. From 18-22 September 1968, the [redacted] was visited to perform pre-acceptance tests of the Rapid Alignment Device (RAD). [redacted] Manager of Sales, [redacted] Project Manager, were contacted.

2. Despite previous assurances, [redacted] was not ready with the instrument. The preceeding night, a problem had developed with a shift in one image that resulted in a double image when viewed through the monocular eyepiece. The cause of this was subsequently determined to be an incorrectly cemented beam splitter. A day was lost in procuring and installing a new beam splitter.

3. Another problem was evidenced by a displaced field of illumination observed with [redacted] anamorphic eyepieces used in conjunction with a Zoom 70 microstereoscope. The cause of this displacement has not yet been determined. It could possibly result from optical misalignment in either the anamorphic eyepieces or the Zoom 70, or it could be an inherent misalignment between the optical and mechanical axes of the Zoom 70 resulting from production tolerances during manufacture. However, the displacement was markedly observed only with the [redacted] anamorphic eyepieces in conjunction with the Zoom 70 and not with [redacted] anamorphic eyepieces when used with the same Zoom 70. Nor was any field displacement observed through other anamorphic eyepieces designed for use with the High-Power Stereoviewer when used with that instrument. [redacted] technical personnel state that although it would be possible for manufacturing tolerances to cause a misalignment of the optical and mechanical axes of the Zoom 70, [redacted] has never become aware of such a problem. These facts would seem to indicate misalignment of the anamorphic eyepieces. In any event, the problem may not be pertinent since the technical requirements specify that the RAD should not decrease the field of view of the instrument with which it is used by more than a specified amount. The distortion under discussion is present in the associated instrument and the RAD does not add to this distortion. It is not expected that the RAD will correct inherent errors in the instruments with which it is used.

4. During the testing procedure two other problems became apparent. A green-colored filter of photographic film was used in one of the optical paths of the RAD. This filter excessively decreased resolution in that path and will be replaced by an optical grade glass filter. Also, an image shift was observed in the RAD. Optical realignment should eliminate this problem.

5. The RAD, otherwise, met requirements and should be ready for further testing during the week of 7 October.



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